

REMARKS

A response to the initial Office Action was due on January 14, 2006. Since this date was a Saturday, the response deadline is automatically extended until Tuesday, January 17, 2006. Monday, January 16, 2006 is a federal holiday. Accordingly, this response is timely filed.

Reconsideration of this application, as amended, is respectfully requested. By this Amendment, section headings have been added to the specification and the Abstract of the Disclosure has been amended to conform with United States Patent and Trademark Office guidelines. Further, claim 1 has been amended to more particularly point out and distinctly claim the subject invention, and new claims 3-6 have been added. The addition of "new matter" has been scrupulously avoided. Support for the amended feature of claim 1 will be found on page 12, lines 1-2 of the original specification. Similarly, support for the features of new claims 4, 5 and 6 will found in the original specification at page 12, lines 17-18, page 10, lines 29-30, and page 11, lines 6-10, respectively. Claims 1-6 remain in this case.

In the initial Office Action, the original Declaration was found to be defective because the foreign country of residence of each inventor was not identified therein. This residence information is being provided on an accompanying supplemental Application Data Sheet.

The original drawings were objected to because Figures 1-3 were not labeled as "Prior Art", reference sign "15" was not labeled in the drawings, and reference sign "10" shown in the drawings was not mentioned in the description.

Under cover of a separate letter to the Official Draftsperson, replacement drawing sheets 1/5, 2/5 and 3/5 are being submitted. In the replacement drawings, Figures 1-3 have been labeled as "Prior Art", reference sign 15 has been added to Fig. 1, and reference sign 10 has been deleted from Fig. 4. Approval of these drawing corrections and entry of the replacement drawing sheets are respectfully requested.

The Examiner objected to the Abstract of the Disclosure because of certain language used therein and because it was not limited to a single paragraph. The Abstract has been amended hereby to remedy these objections.

In addition, Section headings have been added to the specification, as required by the Examiner.

Claim 1 was objected to because of the language "and in particular infrared radiations" in this claim. Claim 1 has been amended to remove this phrase which is now the subject of new claim 3.

Claims 1 and 2 stand rejected under 35 U.S.C. 102(b) as allegedly anticipated by Parrish et al. (U.S. Patent No. 6,028,309). To the extent that this rejection is deemed applicable to the claims as now presented, the rejection is respectfully, but most strenuously traversed.

The present invention is directed to a device for detecting electromagnetic radiations which implements a detection circuit associated with a reading circuit and includes an associated memory employed for adaptive baselining wherein the associated memory comprises an internal memory physically implanted at a pixel level. This physical integration of the adaptive baselining memory into the pixel not only simplifies the circuit's drive electronics but also improves the immunity to disturbances of the digital part of the circuit relative to the analogue part for reading and for shaping the electromagnetic signal detected.

In contrast, Parrish et al employs an external memory for storing bits used in adaptive baselining. The "data latches" (43) of the Parrish reference act as a buffer memory, with the external memory of the circuit. This is clearly shown in Figure 44 of the applied reference, where the external memory (51) is called a "frame memory".

The construction and limitations of the prior art approach of Parrish et al. are described in the background section of the present application beginning at page 4, line 12 through page 7, line 7. This construction not only employs an external memory, associated with the detection/reading circuit thus, to some extent complicating the electronics of the reading and detection circuit, but also reading of the digital information specific to each pixel is performed during analogue integration by the detectors, generating additional noise at the level of the reading circuit resulting in degradation in the noise performance of the reading circuit. See page 6 of the present application.

The present invention by implementing the memory associated with each pixel as an internal memory physically implanted at the pixel level, overcomes these drawbacks of the applied prior art. There is no teaching, disclosure or suggestion of this feature of Applicant's claimed invention in the applied reference.

The dependent claims are allowable for the same reasons as the independent claim from which they all ultimately depend, as well as for their additional limitations. Claim 2, for

example, specifies that reading of data of each of memories associated with said pixels occurs between an end of integration of a row n and start of integration of a row $n+1$ of the array of pixels. In contrast, in the applied reference, reading of the data of row n takes place during integration of a prior row. The approach of the present invention provides a significant gain in noise performance of the reading circuit.

For all of the above reasons, the claims remaining in this application are believed to be in condition for allowance and such action is respectfully requested.

Respectfully submitted,

A handwritten signature in black ink that reads "Jeff Rothenberg". The signature is fluid and cursive, with a long horizontal stroke at the end.

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